

## High performance series

### Dosage module

Dispensing unit for precise low volume dosage



- **High dosage precision**  
precision CV <1% at low volumes
- **Exchangeable reservoir**  
for cartridges 30 and 55 ml
- **Constant precision**  
pump parts made of tungsten carbide
- **Broad viscosity range**  
adhesives, oil, grease, polymers, gel
- **Compact dimensions**  
120 x 60 x 200 mm, including controller and cartridge
- **Precision motor and sophisticated control**  
DC-servomotor with integrated microcontroller
- **Dosage of small amounts**  
discrete dosage and continuous delivery

The dosage module for the m zr-2905 and m zr-4605 pumps can be used for volumetric dosage of adhesives like UV cure adhesive, epoxy resin, screw fixing varnish, lubricants and silicon. The dosage module suits the dispensing of smallest amounts of liquids requiring highly precise handling

(small beads or spots) and the absence of afterrun. The liquid can be supplied from a 30 or 55 ml disposable cartridge which is directly connected to the pump. For liquids with higher viscosity, pressure of up to 5 bar may be applied to the cartridge. An air discharge screw enables to bleed the system

after cartridge exchange or to supply flushing liquid for cleaning. The dosing needles can be directly connected to the Luer-Lock male adapter of the pump. With the fixing bracket the module may be mounted onto the handling device.

#### Applications

- Bead dispense
- Filling technology
- Assembly stations
- Backfill of electronic components
- Labeling
- Oil dispensing
- Adhesive dispensing
- Grease dispensing
- Silicon dispensing

#### Technical data

	m zr-2905	m zr-4605
Smallest dosage volume	0.5 µl	2 µl
Diff. pressure range (>16 mPas)	0 – 30 bar (435 psi)	0 – 50 bar(725 psi)
Initial pneumatic pressure	0 – 5 bar (73 psi)	
Viscosity range	up to 50,000 mPas (max. 100,000 mPas)	
Precision	< 1 % Coefficient of Variation CV	
Dosing needle connection	Luer-Lock male	
Cartridge connection	Luer-Lock female	
Wetted parts	stainless steel 316L, Ni-based tungsten carbide, shaft seal: graphite-reinforced PTFE, 316L; static seals: FPM, optional: FFFPM	
Motor	DC-servomotor, 24 V DC, 44 W	
Interface	0–10 V, RS-232, 1 digital input/output	
Controller	integrated 16-bit microcontroller with 7936 Bytes program memory for dosage tasks	
Measurements (L x B x H)	120 x 64 x 230 mm	
Weight	approx. 1040 g	

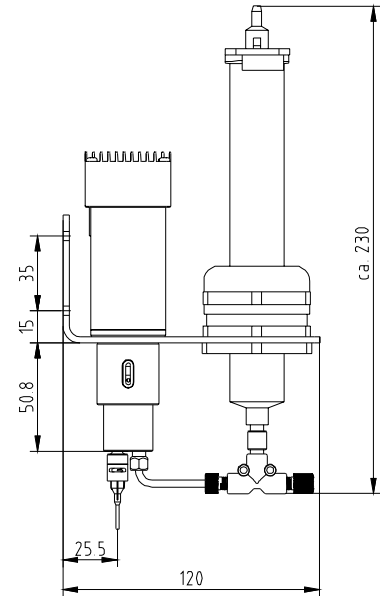
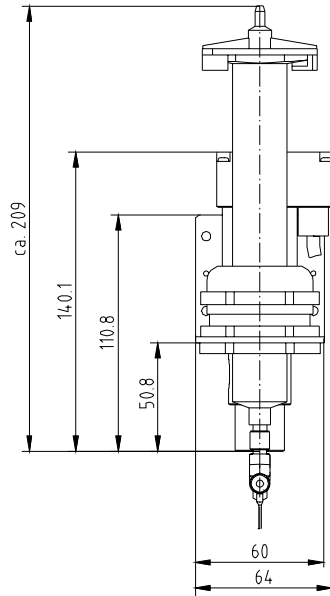
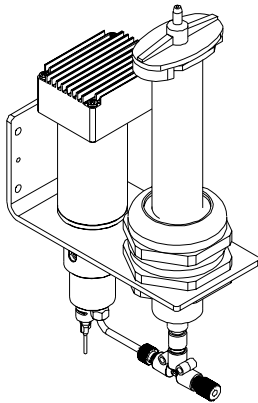
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## Measurements



Subject to technical changes.

## Item number

00 07 01 00

Dosage module (pump not included) for micro annular gear pumps m zr-2905, m zr-4605, adapter for assembly, 55 ml disposable cartridge with Luer-Lock male connector, adapter for inlet pressure, cartridge holder Ø 1 inch, complete tubing, purge valve and precision tip adapter

10 01 01 05

pump m zr-2905, terminal box, null-modem cable and software »Motion Manager«

10 02 01 05

pump m zr-4605, terminal box, null-modem cable and software »Motion Manager«

## Accessories

*Liquid supply accessories*

cartridges, dosage needles, check valves etc.

Micro annular gear pumps (and housings) are protected by assigned patents: DE 198 43 161 C2, EP 1115979 B1, US 6,520,757 B1, EP 852674 B1, US 6,179,596 B1, EP 1354135. Patents pending: DE 101 46 793, US 10,466,792, DE 10 2004 052 866. In the US, Europe and Japan additional patents are pending. m zr® is a registered German trademark of HNP Mikrosysteme GmbH.